

Abstract

Disclosed are methods and systems for restoring cardiac function or preventing cardiac dysfunction, particularly cardiac pacing dysfunction by genetic modification of the conduction system of the heart. In one embodiment, the invention provides a method of genetically modifying the cells by delivering to the cells one or more coding sequences in a genetic construct capable of modifying the expression of or conductance of ion channels of the cells of the atrioventricular node cells to suppress conductance of impulses therethrough in combination with pacemaker treatment.